163V5

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EN	User manual	1
	Customer care and warranty	19
	Troubleshooting & FAQs	24

PHILIPS

Table of Contents

1. Important 1
- 1.1 Safety precautions and maintenance...1
- 1.2 Notational Descriptions 2
- 1.3 Disposal of product and packing material 3

2. Setting up the monitor 4
- 2.1 Installation 4
- 2.2 Operating the monitor 5
- 2.3 Remove Base Stand 7

3. Image Optimization 8
- 3.1 SmartContrast 8
- 3.2 Philips SmartControl Lite 8

4. Technical Specifications 15
- 4.1 Resolution & Preset Modes 17

5. Power Management 18

6. Customer care and warranty 19
- 6.1 Philips' Flat Panel Monitors Pixel Defect Policy 19
- 6.2 Customer Care & Warranty 21

7. Troubleshooting & FAQs 24
- 7.1 Troubleshooting 24
- 7.2 General FAQs 25

1. Important

This electronic user's guide is intended for anyone who uses the Philips monitor. Take time to read this user manual before you use your monitor. It contains important information and notes regarding operating your monitor.

The Philips guarantee applies provided the product is handled properly for its intended use, in accordance with its operating instructions and upon presentation of the original invoice or cash receipt, indicating the date of purchase, dealer's name and model and production number of the product.

1.1 Safety precautions and maintenance

Warnings

Use of controls, adjustments or procedures other than those specified in this documentation may result in exposure to shock, electrical hazards and/or mechanical hazards.

Read and follow these instructions when connecting and using your computer monitor.

Operation

- Please Keep the monitor out of direct sunlight, very strong bright lights and away from any other heat source. Lengthy exposure to this type of environment may result in discoloration and damage to the monitor.
- Remove any object that could fall into ventilation holes or prevent proper cooling of the monitor's electronics.
- Do not block the ventilation holes on the cabinet.
- When positioning the monitor, make sure the power plug and outlet are easily accessible.
- If turning off the monitor by detaching the power cable or DC power cord, wait for 6 seconds before attaching the power cable or DC power cord for normal operation.
- Please use approved power cord provided by Philips all the time. If your power cord is missing, please contact with your local service center. (Please refer to Customer Care Consumer Information Center)
- Do not subject the monitor to severe vibration or high impact conditions during operation.
- Do not knock or drop the monitor during operation or transportation.

Maintenance

- To protect your monitor from possible damage, do not put excessive pressure on the LCD panel. When moving your monitor, grasp the frame to lift; do not lift the monitor by placing your hand or fingers on the LCD panel.
- Unplug the monitor if you are not going to use it for an extensive period of time.
- Unplug the monitor if you need to clean it with a slightly damp cloth. The screen may be wiped with a dry cloth when the power is off. However, never use organic solvent, such as, alcohol, or ammonia-based liquids to clean your monitor.
- To avoid the risk of shock or permanent damage to the set, do not expose the monitor to dust, rain, water, or excessive moisture environment.
- If your monitor gets wet, wipe it with dry cloth as soon as possible.
- If foreign substance or water gets in your monitor, please turn the power off immediately and disconnect the power cord. Then, remove the foreign substance or water, and send it to the maintenance center.
- Do not store or use the monitor in locations exposed to heat, direct sunlight or extreme cold.
- In order to maintain the best performance of your monitor and use it for a longer lifetime, please use the monitor in a location that falls within the following temperature and humidity ranges.

- Temperature: 0-40°C 32-95°F
- Humidity: 20-80% RH

Important information for Burn-in/Ghost image.

- Always activate a moving screen saver program when you leave your monitor unattended. Always activate a periodic screen refresh application if your monitor will display unchanging static content. Uninterrupted display of still or static images over an extended period may cause "burn in", also known as "after-imaging" or "ghost imaging", on your screen. "Burn-in", "after-imaging", or "ghost imaging" is a well-known phenomenon in LCD panel technology. In most cases, the "burned in" or "after-imaging" or "ghost imaging" will disappear gradually over a period of time after the power has been switched off.

Warning

Failure to activate a screen saver, or a periodic screen refresh application may result in severe" burn-in" or "after-image" or "ghost image" symptoms will not disappear and cannot be repaired. The damage mentioned above is not covered under your warranty.

Service

- The casing cover should be opened only by qualified service personnel.
- If there is any need for any document for repair or integration, please contact with your local service center. (please refer to the chapter of "Consumer Information Center")
- For transportation information, please refer to "Technical Specifications".
- Do not leave your monitor in a car/trunk under direct sun light.

Note

Consult a service technician if the monitor does not operate normally, or you are not sure what procedure to take when the operating instructions given in this manual have been followed.

1.2 Notational Descriptions

The following subsections describe notational conventions used in this document.

Notes, Cautions and Warnings

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold or italic type. These blocks contain notes, cautions or warnings. They are used as follows:

Note

This icon indicates important information and tips that help you make better use of your computer system.

Caution

This icon indicates information that tells you how to avoid either potential damage to hardware or loss of data.

Warning

This icon indicates the potential for bodily harm and tells you how to avoid the problem.

Some warnings may appear in alternate formats and may not be accompanied by an icon. In such cases, the specific presentation of the warning is mandated by the relevant regulatory authority.

1.3 Disposal of product and packing material

Waste Electrical and Electronic Equipment-WEEE

This marking on the product or on its packaging illustrates that, under European Directive 2002/96/EC governing used electrical and electronic appliances, this product may not be disposed of with normal household waste. You are responsible for disposal of this equipment through a designated waste electrical and electronic equipment collection. To determine the locations for dropping off such waste electrical and electronic, contact your local government office, the waste disposal organization that serves your household or the store at which you purchased the product.

Your new monitor contains materials that can be recycled and reused. Specialized companies can recycle your product to increase the amount of reusable materials and to minimize the amount to be disposed of.

All redundant packing material has been omitted. We have done our utmost to make the packaging easily separable into mono materials.

Please find out about the local regulations on how to dispose of your old monitor and packing from your sales representative.

Taking back/Recycling Information for Customers

Philips establishes technically and economically viable objectives to optimize the environmental performance of the organization's product, service and activities.

From the planning, design and production stages, Philips emphasizes the important of making products that can easily be recycled. At Philips, end-of-life management primarily entails participation innational take-back initiatives and recycling programs whenever possible, preferably in cooperation with competitors, which recycle all materials (products and related packaging material) in accordance with all Environmental Laws and taking back program with the contractor company.

Your display is manufactured with high quality materials and components which can be recycled and reused.

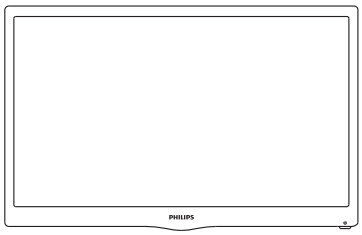
To learn more about our recycling program please visit

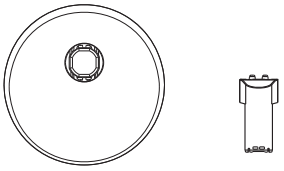
http://www.philips.com/sites/philipsglobal/about/sustainability/ourenvironment/productrecyclingservices.page

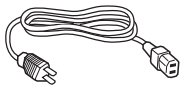
2. Setting up the monitor

2.1 Installation

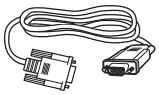
1 Package contents







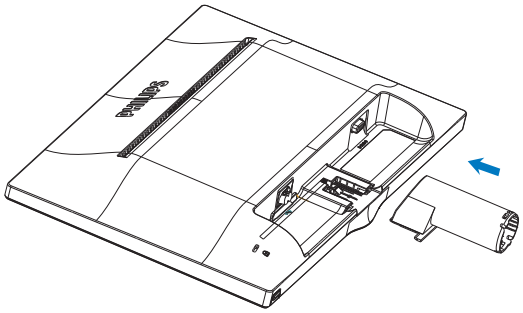
Power Cable



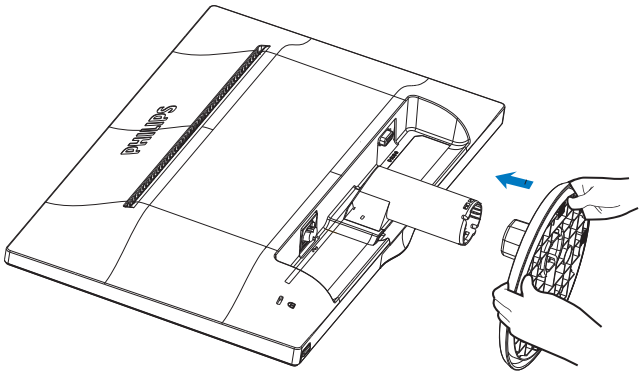
VGA Cable

2 Install base stand

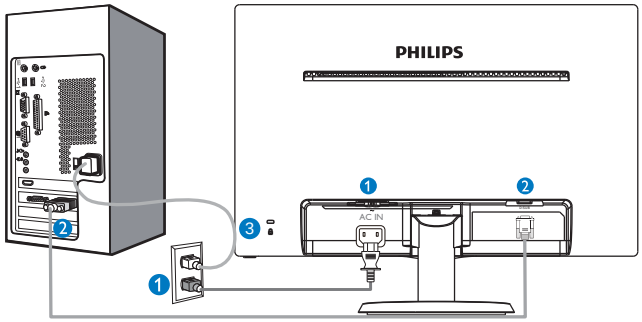
1. Place the monitor face down on soft and smooth surface taking care to avoid scratching or damaging the screen.
2. Attach/slide the base column with the monitor until it clicks into position.



3. Hold the monitor base stand with both hands and firmly insert the base stand into the base column.



3 Connecting to your PC



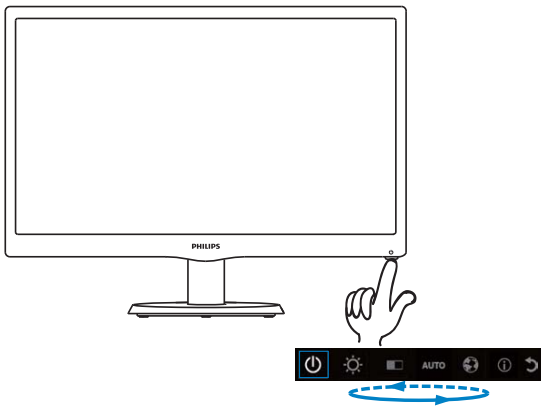
1. AC power input
2. VGA input
3. Kensington anti-theft lock

Connect to PC

1. Connect the power cord to the back of the monitor firmly.
2. Turn off your computer and unplug its power cable.
3. Connect the monitor signal cable to the video connector on the back of your computer.
4. Plug the power cord of your computer and your monitor into a nearby outlet.
5. Turn on your computer and monitor. If the monitor displays an image, installation is complete.

2.2 Operating the monitor

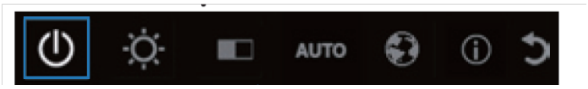
1 Front view product description



2 Description of the On Screen Display

What is On-Screen Display (OSD)?

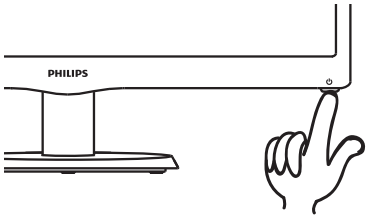
On-Screen Display (OSD) is a feature in all Philips LCD monitors. It allows an end user to adjust screen performance or select functions of the monitors directly through an on-screen instruction window. A user friendly on screen display interface is shown as below:



	Switch monitor's power ON and OFF.
	Adjust the brightness level.
	Adjust the contrast level.
AUTO	Automatically adjust the monitor.
	Adjust language
	Show the imformation
	Exit OSD

How to adjust OSD with a single key?

1. The key on the bottom of the front bezel provides dual functions to control power on/ off and OSD menu setting.



2. Turn on the monitor by pressing the bottom key once.

3. Now press the bottom key of front bezel again, to enter the OSD menu.

4. You can now select any one of the functions by quickly repeat-pressing the bottom key. The blue box will navigate towards the right as you press the key. You can release the bottom key once the blue box highlights the option you want to choose. Note that the selection is one way loop always moving one direction and then returning at beginning of the menu.

5. The blue box will remain on the selected function for about 3 seconds and the function icon will flash three times to confirm the choice visible on the 1st layer of the OSD and activate it.

6. To select language of your choice please press the bottom key, choose the "Globe" symbol on the OSD menu and let it activate. Multiple options of language will appear on the menu. Repeat press the bottom key again and scroll through the languages. Leaving the blue box on the language of your choice will select and activate it.

7. To adjust brightness or contrast please press the bottom key, choose and activate it. Press the bottom key again to adjust. Note that the selection is one way loop always moving one direction and then returning at beginning of the menu.

The OSD Menu

Below is an overall view of the structure of the On-Screen Display. You can use this as a reference when you want to work your way around the different adjustments later on.

Main menu

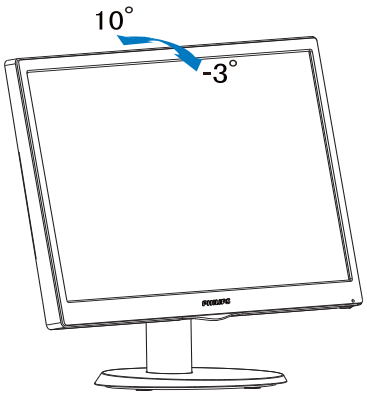
- Power off
- Brightness — 0~100
- Contrast — 0~100
- Auto
- Language — English, German, Spanish, Greek, French, Italian, Hungarian, Dutch, Portuguese, Português do Brazil, Russian, Polish, Swedish, Finnish, Türkçe, Czech, Ukrainian, S. Chinese, T.Chinese, Japaness, Korean
- Information
- Exit

3 Resolution notification

This monitor is designed for optimal performance at its native resolution, 1366 × 768 @ 60 Hz. When the monitor is powered on at a different resolution, an alert is displayed on screen: Use 1366 × 768 @ 60 Hz for best results.

4 Physical Function

Tilt

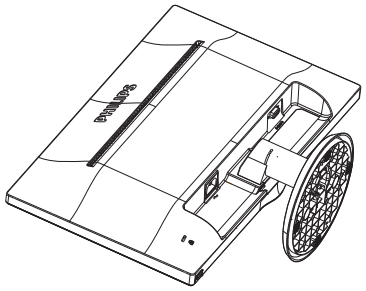


2.3 Remove Base Stand

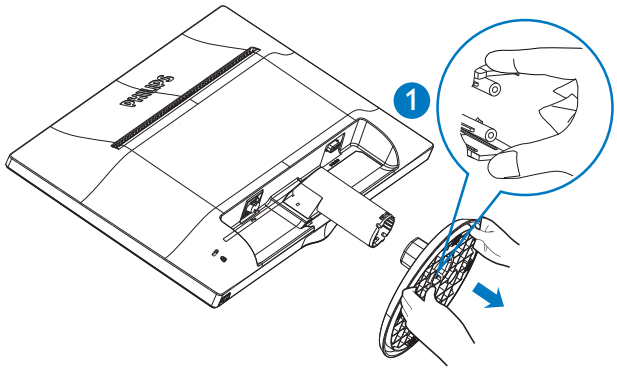
1 Remove the Base Stand

Before you start disassembling the monitor base, please follow the instructions below to avoid any possible damage or injury.

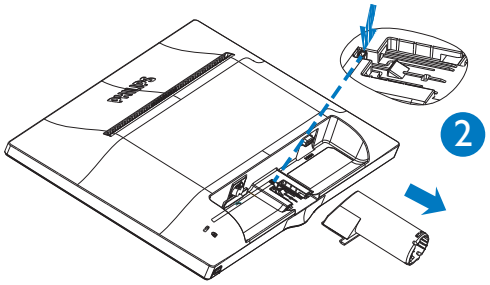
1. Place the monitor face down on a smooth surface, taking care to avoid scratching or damaging the screen.



2. Press the locking clips to detach the base stand away from the base column.



3. Detach the base column.



3. Image Optimization

3.1 SmartContrast

1 What is it?

A unique technology that dynamically analyzes displayed content and automatically optimizes an LCD monitor's contrast ratio for maximum visual clarity and viewing enjoyment, stepping up backlighting for clearer, crisper and brighter images or dimming backlighting for clear display of images on dark backgrounds.

2 Why do I need it?

You want the very best visual clarity and viewing comfort for every type of content. SmartContrast dynamically controls contrast and adjusts backlighting for clear, crisp, bright gaming and video images or displays clear, readable text for office work. By reducing your monitor's power consumption, you save on energy costs and extend the lifetime of your monitor.

3 How does it work?

When you activate SmartContrast, it will analyse the content you are displaying in real time to adjust colors and control backlight intensity. This function will dynamically enhance contrast for a great entertainment experience when viewing videos or playing games.

3.2 Philips SmartControl Lite

The new SmartControl Lite software by Phillips allows you to control your monitor via an easy to use on-screen graphic interface. Complicated adjustments are a thing of the past as this user friendly software guides you through fine-tuning resolution, Color calibration, Clock/Phase adjustments, RGB White point adjustment, etc.

Equipped with latest technology in core algorithm for fast processing and response, this Windows 7 compliant eye catching animated Icon based software is ready to enhance your experience with Philips monitors!

1 Installation

- Follow the instruction and complete the installation.
- You can launch after installation is completed.
- If you want to launch later, you can either click the shortcut on desktop or toolbar.

PHILIPS
www.philips.com/welcome
Required steps
► Select Language
► Welcome
► Monitor driver and software installation
► Registration
Reference materials
► Quick Setup Guide
► Read User Manual
► FAQ & Troubleshooting
Monitor driver and software installation
System requirements:
• PC running Windows 7, Vista, XP, 2000, 98.
► Go to www.philips.com/welcome to download the latest version of monitor driver
Philips SmartControl
System support and requirements:
1. System support Windows 7, Vista, XP.
2. Language support English, German, Spanish, French, Italian, Russian, Portuguese, Simplified Chinese
3. Philips Monitor Plug and Play support
► Go to http://www.portrait.com/dtune/phl/enu/index.html to download the latest version of SmartControl software.
Quit
Back
Next

First launch -Wizard

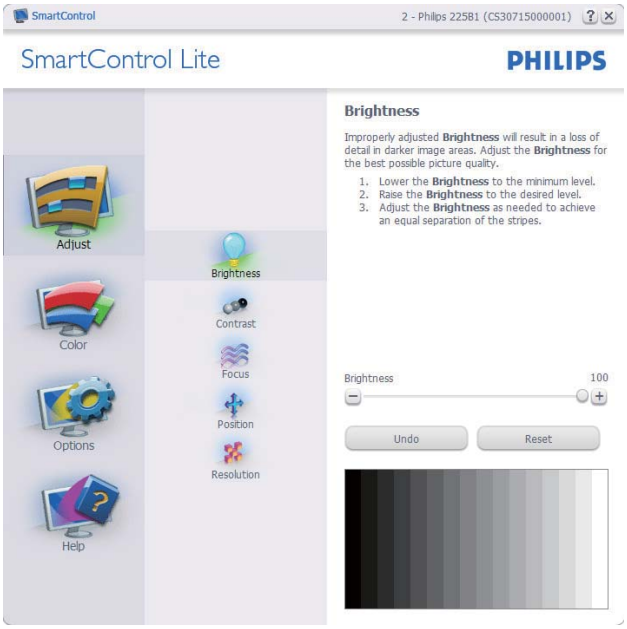
- The first time after installation of SmartControl Lite, it will automatically go to Wizard for first time launch.
- The wizard will guide you through adjusting your monitor performance step by step.
- You can go to Plug-in menu to launch wizard later on as well.
- You can adjust more options without wizard by Standard pane.

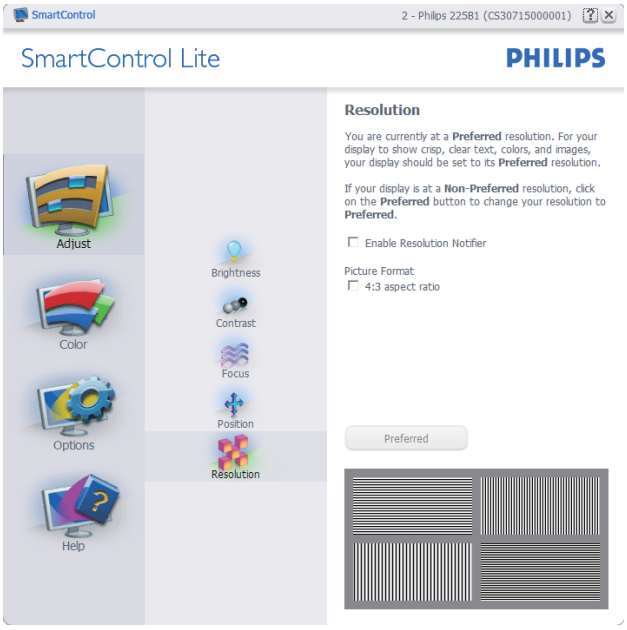
SmartControl
2 - Philips 225B1 (CS30715000001)
SmartControl Lite
PHILIPS
Adjust
Color
Options
Help
Audio
Auto Pivot
Input
Wizard
Presets
Multi Monitors
Wizard
You'll need to calibrate your display to get the most accurate color. We encourage you to use the simple tuning process by selecting the Start Wizard button. This process involves a series of steps that will let you tune your display and save the settings.
1. Choose the Start Wizard button.
2. Follow the steps outlined in this process.
3. Save your settings for future use.
Start Wizard

2 Start with Standard pane:

Adjust menu:

- Adjust Menu allow you to adjust Brightness, Contrast, Focus, Position and Resolution.
- You can follow the instruction and do the adjustment.
- Cancel prompts user if you want to cancel installation.





SmartControl
2 - Philips 225B1 (CS30715000001)
SmartControl Lite
PHILIPS
Adjust
Color
Options
Help
RGB
Black Level
White Point
Display Gamma
Calibration
White Point
White Point is the point at which equal combinations of red, green, and blue light at full intensity create white. This effects the overall color quality. For the most accurate colors click the Reset button then select the White Point.
1. Please select the White Point value for the best possible color quality.
White Point
6500K
Undo
Reset

Color menu:

- Color Menu allow you to adjust RGB, Black Level, White Point, and Color Calibration.
- You can follow the instruction and do the adjustment.
- Refer to below table for sub-menu item base on your input.
- Example for Color Calibration:

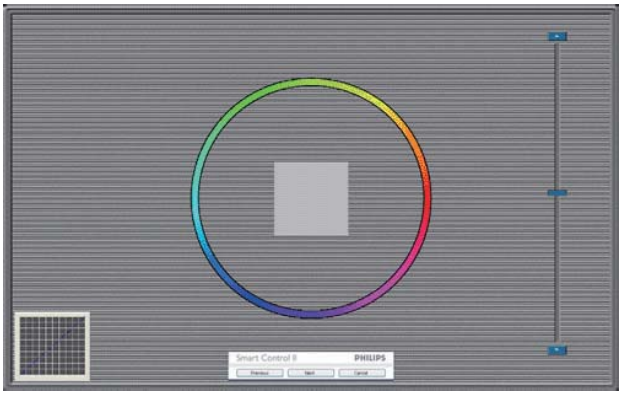
SmartControl
2 - Philips 225B1 (CS30715000001)
SmartControl Lite
PHILIPS
Adjust
Color
Options
Help
RGB
Black Level
White Point
Display Gamma
Calibration
Display Gamma
Gamma is a component of the pixel brightness in a display. A lower Gamma value produces brighter pixels and a higher Gamma value produces darker pixels. The default value for Gamma is 2.2.
To adjust Gamma, SmartImage must be set to Off. Click the SmartImage Off button before adjusting Gamma.
1. Use the slider to select the desired Gamma.
Display Gamma
2.2
SmartImage Off
Undo
Reset

SmartControl
2 - Philips 225B1 (CS30715000001)
SmartControl Lite
PHILIPS
Adjust
Color
Options
Help
RGB
Black Level
White Point
Display Gamma
Calibration
Calibration
Your display needs to be properly calibrated in order for it to produce the widest range of colors accurately. Calibration should always take place as the last tuning step in the process. Remember to recalibrate any time you make individual adjustments to image quality or whenever you move your display to a new location.
1. Make all other necessary adjustments to image quality first.
2. Press Show Me to learn how to use the calibration tools.
3. Finally, press Start to begin the calibration process.
Enable color calibration
Color software designed in collaboration with Joseph Holmes.
Protected by U.S. Patent No. 6,686,953
Show Me
Start
Quick View

3. Image Optimization

1. "Show Me" starts color calibration tutorial.
2. Start - starts the 6-step color calibration sequence.
3. Quick View loads the before/after images.
4. To return to Color home pane, click the **Cancel** button.
5. Enable color calibration - by default is on. If unchecked, does not allow for color calibration to happen, dimes out start and quick view buttons.
6. Must have patent info in calibration screen.

First color Calibration Screen:



- Previous button is disabled until the second color screen.
- Next goes to the succeeding target (6-targets).
- Final next goes File>Presets pane.
- Cancel closes the UI and returns to the plug in page.

Options>Preferences - Will only be active when selecting Preferences from the drop-down Options menu. On a non-supported display capable of DDC/CI, only the Help and Options tabs are available.

- Displays current preference settings.
- A checked box enables the feature. The check box is a toggle.
- Enable Context Menu on desktop is checked (On) by default. Enable Context menu displays SmartControl Lite selections for Select Preset and Tune Display in the desktop right-click context menu. Disabled removes SmartControl Lite from the right click context menu.
- Enable Task Tray icon is checked (On) by default. Enable context menu shows the task tray menu for SmartControl Lite. A right click on the task tray icon displays the menu options for Help, Technical Support, Check for Upgrade, About, and Exit. When Enable task tray menu is disabled, the task tray icon will only display EXIT.
- Run at Startup is checked (On) by default. When disabled, SmartControl Lite will not launch at start or be in the task tray. The only way to launch SmartControl Lite is either from the desktop short cut or from the program file. Any preset set to run at startup will not load when this box is unchecked (Disabled).
- Enable transparency mode (Windows 7, Vista, XP). Default is 0% Opaque.

Options>Input - Will only be active when selecting Input from the drop-down Options menu. On a non-supported display capable of DDC/CI, only the Help and Options tabs are available. All other SmartControl Lite tabs are not available.

SmartControl
2 - Philips 22581 (CS30715000001)
SmartControl Lite
PHILIPS
Adjust
Color
Options
Help
Audio
Auto Pivot
Input
Wizard
Presets
Multi Monitors
Input
Your display has two inputs (connections on back of this display) so you can hook up two different sources at the same time. Use the Analog In and Digital In buttons to select which source you'd like to view. You are currently viewing the analog in image.
IMPORTANT! If you switch inputs SmartControl may lose the ability to control your monitor. In this case you may have to use the Input Select button on the front of your monitor to switch back to the original input before SmartControl functionality can be restored.
Analog In
Digital In

- Display the Source instruction pane and current input source setting.
- On single input displays, this pane will not be visible.

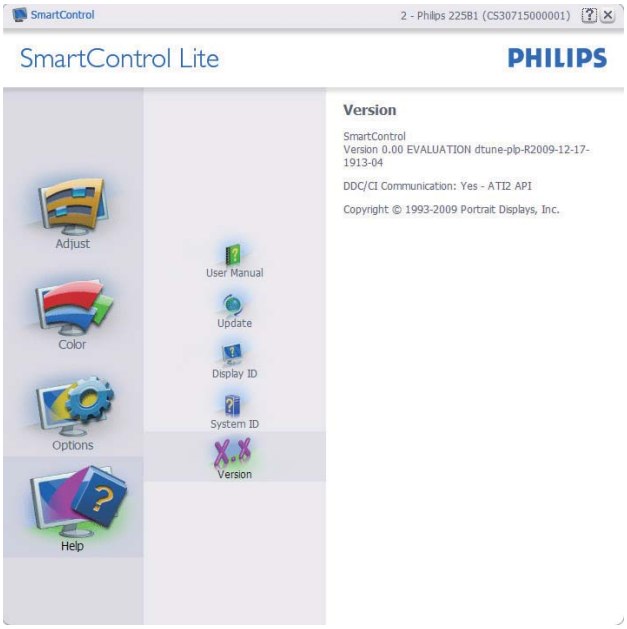
Options>Audio - Will only be active when selecting Audio from the drop-down Options menu.

On a non-supported display capable of DDC/CI, only the Help and Options tabs are available.

Help>User Manual - Will only be active when selecting User Manual from the drop-down Help menu. On a non-supported display capable of DDC/CI, only the Help and Options tabs are available.

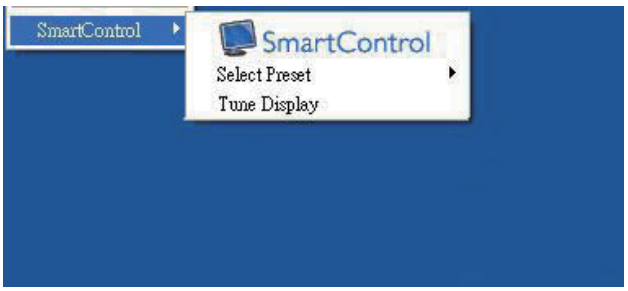
SmartControl
2 - Philips 22581 (CS30715000001)
SmartControl Lite
PHILIPS
Adjust
Color
Options
Help
User Manual
Update
Display ID
System ID
Version
User Manual
If you need help setting up or operating SmartControl, click the Tech. Support button. You'll have the option to fill out an Assistance Form.
You can also choose to have information about your software automatically attached to the assistance form. You'll need to be online to use this feature.
User Manual
Tech. Support

Help>Version - Will only be active when selecting Version from the drop- down Help menu. On a non-supported display capable of DDC/CI, only the Help and Options tabs are available.



Context Sensitive menu

The Context Sensitive menu is Enabled by default. If Enable Context Menu has been checked in the Options>Preferences pane, then the menu will be visible.

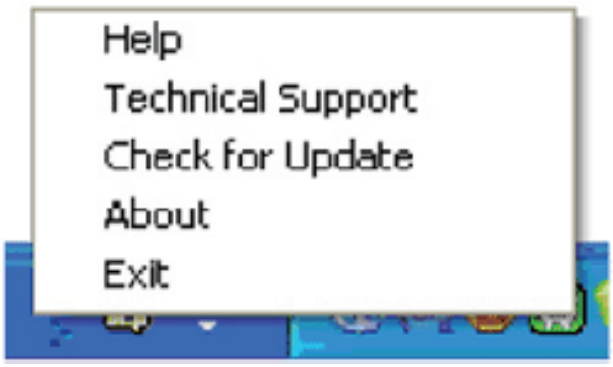


The Context Menu has three entries:

- SmartControl Lite - When selected the About Screen is displayed.
- Select Preset - Provides a hierarchical menu of saved presets for immediate use. A check mark shows the currently selected preset. Factory Preset can also be called from the drop down menu.
- Tune Display - Opens the SmartControl Lite control panel.

Task Tray Menu Enabled

The task tray menu can be displayed by right-clicking on the SmartControl Lite icon from the task tray. Left Click will launch the application.



The task tray has five entries:

- Help - Access to User Manual file: Open User Manual file using the default browser window.
- Technical Support - displays the tech support page.
- Check for Update - takes the user to PDI Landing and checks the user's version against the most current available.
- About - Displays detailed reference information: product version, release information, and product name.
- Exit - Close SmartControl Lite.

To run SmartControl Lite again either select SmartControl Lite from Program menu, double-click the desktop PC icon or restart the system.

Task Tray Menu Disabled

When the Task Tray is disabled in the preference folder, only the EXIT selection is available.
To completely remove SmartControl Lite

from the task tray, disable Run at Startup in Options>Preferences.

Note

All the illustrations in this section are for reference only. SmartControl software version might be changed without notification. Please always check official Portrait website www.portrait.com/dtune/phl/enu/index to download the latest version of SmartControl software.

4. Technical Specifications

Picture/Display	
Monitor Panel Type	TFT-LCD
Backlight	LED
Panel Size	15.6" W (39.6cm)
Aspect Ratio	16:9
Pixel Pitch	0.252 x 0.252 mm
Brightness	220 cd/m²
SmartContrast	10,000,000:1
Contrast Ratio (typ.)	500:1
Response Time (typ.)	11ms
Optimum Resolution	1366 x 768 @ 60Hz
Viewing Angle	90° (H) / 50° (V) @ C/R > 10
Display Colors	262K
Vertical Refresh Rate	56Hz - 75Hz
Horizontal Frequency	30kHz - 83kHz
sRGB	YES
Connectivity	
Signal Input	VGA (Analog)
Input Signal	Separate Sync, Sync on Green
Convenience	
User Convenience	163V5LSB23 :
OSD Languages	English,German,Spanish,Greek,French,Italian,Hungarian,Dutch,Portuguese,Português do Brazil,Russian,Polish,Swedish,Finnish,Türkçe,Czech,Ukrainian,S. Chinese,T.Chinese,Japaness,Korean
Other Convenience	Kensington Lock
Plug & Play Compatibility	DDC/CI, sRGB, Windows 8/ Windows 7/ Vista / XP, Mac OSX, Linux
Stand	
Tilt	-3 / +10

Power	
On Mode	6.97W (typ.),7.62W (max.)
Sleep (Standby)	0.5W
Off	0.5W
Power LED indicator	On mode: White, Standby/Sleep mode: White (blinking)
Power Supply	Built-in, 100-240VAC, 50-60Hz

Dimension	
Product with stand (WxHxD)	370x298x140 mm
Product without stand (WxHxD)	370x237x48 mm
Weight	
Product with stand	0.94kg
Product without stand	0.79kg
Product with packaging	1.766kg
Operating Condition	
Temperature range (operation)	0°C to 40 °C
Temperature range (Non-operation)	-20°C to 60°C
Relative humidity	20% to 80%
MTBF	30,000hrs
Environmental	
ROHS	YES
Packaging	100% recyclable
Cabinet	
Color	Black
Finish	Texture

Note

1. This data is subject to change without notice. Go to www.philips.com/support to download the latest version of leaflet.

4.1 Resolution & Preset Modes

Maximum Resolution
1366 x 768 @ 60 Hz

H. freq (kHz)	Resolution	V. freq (Hz)
31.47	720 x 400	70.09
31.47	640 x 480	59.94
35	640 x 480	66.67
37.86	640 x 480	72.81
37.5	640 x 480	75
37.88	800 x 600	60.32
46.88	800 x 600	75
48.36	1024 x 768	60
60.02	1024 x 768	75.03
44.77	1280 x 720	59.86
63.89	1280 x 1024	60.02
79.98	1280 x 1024	75.03
47.71	1366 x 768	59.79

Note
Please notice that your display works best at native resolution of 1366 x 768 @ 60Hz. For best display quality,please follow this resolution recommendation.

5. Power Management

If you have VESA DPM compliance display card or software installed in your PC, the monitor can automatically reduce its power consumption when not in use. If an input from a keyboard, mouse or other input device is detected, the monitor will 'wake up' automatically. The following table shows the power consumption and signaling of this automatic power saving feature:

163V5LSB23:

Power Management Definition					
VESA Mode	Video	H-sync	V-sync	Power Used	LED Color
Active	ON	Yes	Yes	6.97W (typ.)	White
Sleep (Standby)	OFF	No	No	0.5W (typ.)	White (blink)
Switch Off	OFF	-	-	0.5W (typ.)	OFF

The following setup is used to measure power consumption on this monitor.

- Native resolution: 1366 x 768
- Contrast: 50%
- Brightness: 220 nits
- Color temperature: 6500k with full white pattern

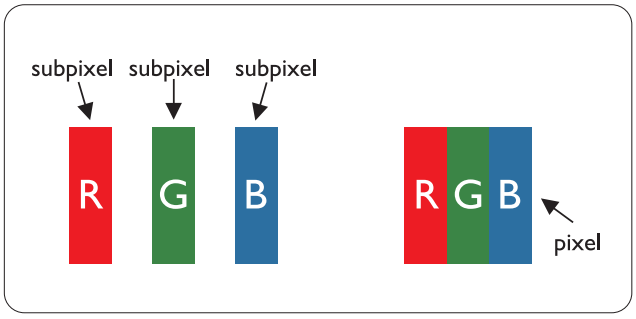
Note

This data is subject to change without notice.

6. Customer care and warranty

6.1 Philips' Flat Panel Monitors Pixel Defect Policy

Philips strives to deliver the highest quality products. We use some of the industry's most advanced manufacturing processes and practice stringent quality control. However, pixel or sub pixel defects on the TFT Monitor panels used in flat panel monitors are sometimes unavoidable. No manufacturer can guarantee that all panels will be free from pixel defects, but Philips guarantees that any monitor with an unacceptable number of defects will be repaired or replaced under warranty. This notice explains the different types of pixel defects and defines acceptable defect levels for each type. In order to qualify for repair or replacement under warranty, the number of pixel defects on a TFT Monitor panel must exceed these acceptable levels. For example, no more than 0.0004% of the sub pixels on a monitor may be defective. Furthermore, Philips sets even higher quality standards for certain types or combinations of pixel defects that are more noticeable than others. This policy is valid worldwide.



Pixels and Sub pixels

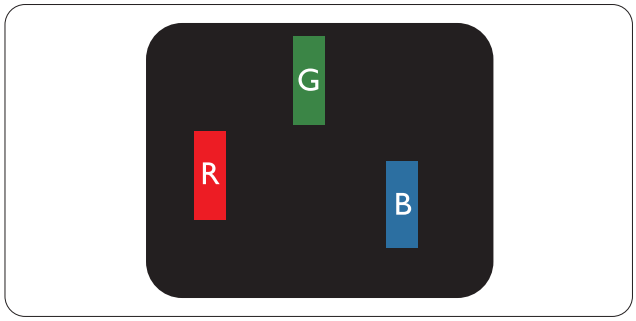
A pixel, or picture element, is composed of three sub pixels in the primary colors of red, green and blue. Many pixels together form an image. When all sub pixels of a pixel are lit, the three colored sub pixels together appear as a single white pixel. When all are dark, the three colored sub pixels together appear as a single black pixel. Other combinations of lit and dark sub pixels appear as single pixels of other colors.

Types of Pixel Defects

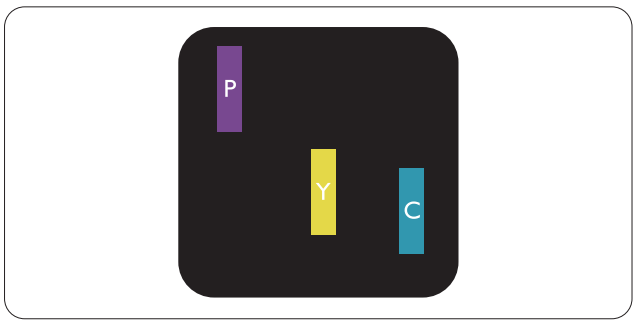
Pixel and sub pixel defects appear on the screen in different ways. There are two categories of pixel defects and several types of sub pixel defects within each category.

Bright Dot Defects

Bright dot defects appear as pixels or sub pixels that are always lit or 'on'. That is, a bright dot is a sub-pixel that stands out on the screen when the monitor displays a dark pattern. There are the types of bright dot defects.

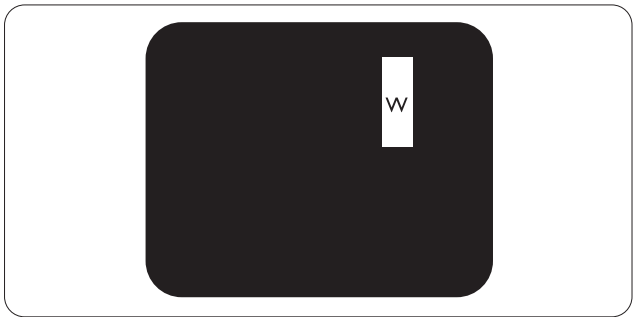


One lit red, green or blue sub pixel.



Two adjacent lit sub pixels:

- Red + Blue = Purple
- Red + Green = Yellow
- Green + Blue = Cyan (Light Blue)



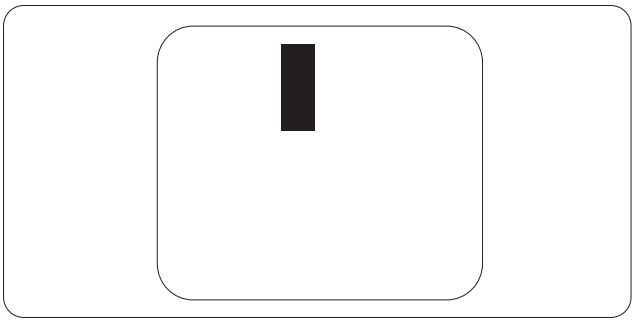
Three adjacent lit sub pixels (one white pixel).

Note

A red or blue bright dot must be more than 50 percent brighter than neighboring dots while a green bright dot is 30 percent brighter than neighboring dots.

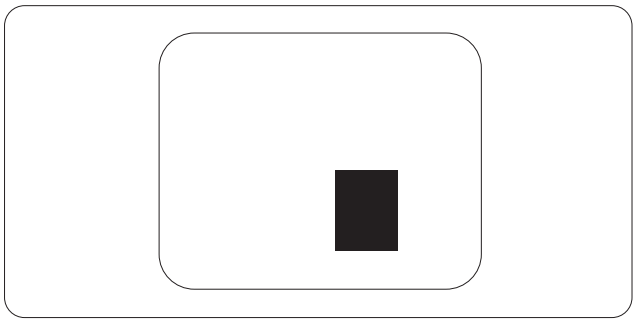
Black Dot Defects

Black dot defects appear as pixels or sub pixels that are always dark or 'off'. That is, a dark dot is a sub-pixel that stands out on the screen when the monitor displays a light pattern. These are the types of black dot defects.



Proximity of Pixel Defects

Because pixel and sub pixels defects of the same type that are near to one another may be more noticeable, Philips also specifies tolerances for the proximity of pixel defects.



Pixel Defect Tolerances

In order to qualify for repair or replacement due to pixel defects during the warranty period, a TFT Monitor panel in a Philips flat panel monitor must have pixel or sub pixel defects exceeding the tolerances listed in the following tables.

BRIGHT DOT DEFECTS	ACCEPTABLE LEVEL
1 lit subpixel	3
2 adjacent lit subpixels	1
3 adjacent lit subpixels (one white pixel)	0
Distance between two bright dot defects*	⩾ 15mm
Total bright dot defects of all types	3

BLACK DOT DEFECTS	ACCEPTABLE LEVEL
1 dark subpixel	5 or fewer
2 adjacent dark subpixels	1 or fewer
3 adjacent dark subpixels	0
Distance between two black dot defects*	⩾ 15mm
Total black dot defects of all types	5 or fewer

TOTAL DOT DEFECTS	ACCEPTABLE LEVEL
Total bright or black dot defects of all types	5 or fewer

Note

1. 1 or 2 adjacent sub pixel defects = 1 dot defect

6.2 Customer Care & Warranty

For warranty coverage information and additional support requirement valid for your region, please visit www.philips.com/support website for details. You may also contact your local Philips Customer Care Center number listed below.

Contact Information for WESTERN EUROPE region:

Country	CSP	Hotline Number	Price	Opening hours
Austria	RTS	+43 0810 000206	€ 0.07	Mon to Fri : 9am - 6pm
Belgium	Ecare	+32 078 250851	€ 0.06	Mon to Fri : 9am - 6pm
Cyprus	Alman	800 92 256	Free of charge	Mon to Fri : 9am - 6pm
Denmark	Infocare	+45 3525 8761	Local call tariff	Mon to Fri : 9am - 6pm
Finland	Infocare	+358 09 2290 1908	Local call tariff	Mon to Fri : 9am - 6pm
France	Mainteq	+33 082161 1658	€ 0.09	Mon to Fri : 9am - 6pm
Germany	RTS	+49 01803 386 853	€ 0.09	Mon to Fri : 9am - 6pm
Greece	Alman	+30 00800 3122 1223	Free of charge	Mon to Fri : 9am - 6pm
Ireland	Celestica	+353 01 601 1161	Local call tariff	Mon to Fri : 8am - 5pm
Italy	Anovo Italy	+39 840 320 041 € 0.08	€ 0.08	Mon to Fri : 9am - 6pm
Luxembourg	Ecare	+352 26 84 30 00	Local call tariff	Mon to Fri : 9am - 6pm
Netherlands	Ecare	+31 0900 0400 063	€ 0.10	Mon to Fri : 9am - 6pm
Norway	Infocare	+47 2270 8250	Local call tariff	Mon to Fri : 9am - 6pm
Poland	MSI	+48 0223491505	Local call tariff	Mon to Fri : 9am - 6pm
Portugal	Mainteq	800 780 902	Free of charge	Mon to Fri : 8am - 5pm
Spain	Mainteq	+34 902 888 785	€ 0.10	Mon to Fri : 9am - 6pm
Sweden	Infocare	+46 08 632 0016	Local call tariff	Mon to Fri : 9am - 6pm
Switzerland	ANOVO CH	+41 02 2310 2116	Local call tariff	Mon to Fri : 9am - 6pm
United Kingdom	Celestica	+44 0207 949 0069	Local call tariff	Mon to Fri : 8am - 5pm

Contact Information for CENTRAL AND EASTERN EUROPE region:

Country	Call center	CSP	Consumer care number
Belarus	N/A	IBA	+375 17 217 3386 +375 17 217 3389
Bulgaria	N/A	LAN Service	+359 2 960 2360
Croatia	N/A	MR Service Ltd	+385 (01) 640 1111
Czech Rep.	N/A	Asupport	420 272 188 300
Estonia	N/A	FUJITSU	+372 6519900(General) +372 6519972(workshop)
Georgia	N/A	Esabi	+995 322 91 34 71
Hungary	N/A	Profi Service	+36 1 814 8080(General) +36 1814 8565(For AOC&Philips only)
Kazakhstan	N/A	Classic Service I.l.c.	+7 727 3097515
Latvia	N/A	ServiceNet LV	+371 67460399 +371 27260399
Lithuania	N/A	UAB Servicenet	+370 37 400160(general) +370 7400088 (for Philips)
Macedonia	N/A	AMC	+389 2 3125097
Moldova	N/A	Comel	+37322224035
Romania	N/A	Skin	+40 21 2101969
Russia	N/A	CPS	+7 (495) 645 6746
Serbia&Montenegro	N/A	Kim Tec d.o.o.	+381 11 20 70 684
Slovakia	N/A	Datalan Service	+421 2 49207155
Slovenia	N/A	PC H.and	+386 1 530 08 24
the republic of Belarus	N/A	ServiceBy	+ 375 17 284 0203
Turkey	N/A	Tecpro	+90 212 444 4 832
Ukraine	N/A	Topaz	+38044 525 64 95
	N/A	Comel	+380 5627444225

Contact Information for China:

Country	Call center	Consumer care number
China	PCCW Limited	4008 800 008

Contact Information for NORTH AMERICA :

Country	Call center	Consumer care number
U.S.A.	EPI-e-center	(877) 835-1838
Canada	EPI-e-center	(800)479-6696

Contact Information for APMEA region:

Country	ASP	Consumer care number	Opening hours
Australia	AGOS NETWORK PTY LTD	1300 360 386	Mon.~Fri. 9:00am-5:30pm
New Zealand	Visual Group Ltd.	0800 657447	Mon.~Fri. 8:30am-5:30pm
Hong Kong Macau	Company: Smart Pixels Technology Ltd.	Hong Kong: Tel: +852 2619 9639 Macau: Tel: (853)-0800-987	Mon.~Fri. 9:00am-6:00pm Sat. 9:00am-1:00pm
India	REDINGTON INDIA LTD	Tel: 1 800 425 6396 SMS: PHILIPS to 56677	Mon.~Fri. 9:00am-5:30pm
Indonesia	PT. CORMIC SERVISINDO PERKASA	+62-21-4080-9086 (Customer Hotline) +62-8888-01-9086 (Customer Hotline)	Mon.~Thu. 08:30-12:00; 13:00-17:30 Fri. 08:30-11:30; 13:00-17:30
Korea	Alphascan Displays, Inc	1661-5003	Mon.~Fri. 9:00am-5:30pm Sat. 9:00am-1:00pm
Malaysia	R-Logic Sdn Bhd	+603 5102 3336	Mon.~Fri. 8:15am-5:00pm Sat. 8:30am-12:30am
Pakistan	TVONICS Pakistan	+92-213-6030100	Sun.~Thu. 10:00am-6:00pm
Singapore	Philips Electronics Singapore Pte Ltd (Philips Consumer Care Center)	(65) 6882 3966	Mon.~Fri. 9:00am-6:00pm Sat. 9:00am-1:00pm
Taiwan	FETEC.CO	0800-231-099	Mon.~Fri. 09:00 - 18:00
Thailand	Axis Computer System Co., Ltd.	(662) 934-5498	Mon.~Fri. 08:30am~05:30pm
South Africa	Computer Repair Technologies	011 262 3586	Mon.~ Fri. 08:00am~05:00pm
Israel	Eastronics LTD	1-800-567000	Sun.~Thu. 08:00-18:00
Vietnam	FPT Service Informatic Company Ltd. - Ho Chi Minh City Branch	+84 8 38248007 Ho Chi Minh City +84 5113.562666 Danang City +84 5113.562666 Can tho Province	Mon.~Fri. 8:00-12:00, 13:30-17:30 Sat. 8:00-12:00
Philippines	EA Global Supply Chain Solutions ,Inc.	(02) 655-7777; 6359456	Mon.~Fri. 8:30am~5:30pm
Armenia Azerbaijan Georgia Kyrgyzstan Tajikistan	Firebird service centre	+97 14 8837911	Sun.~Thu. 09:00 - 18:00
Uzbekistan	Soniko Plus Private Enterprise Ltd	+99871 2784650	Mon.~Fri. 09:00 - 18:00
Turkmenistan	Technostar Service Centre	+(99312) 460733, 460957	Mon.~Fri. 09:00 - 18:00

7. Troubleshooting & FAQs

7.1 Troubleshooting

This page deals with problems that can be corrected by a user. If the problem still persists after you have tried these solutions, contact Philips customer service representative.

1 Common Problems

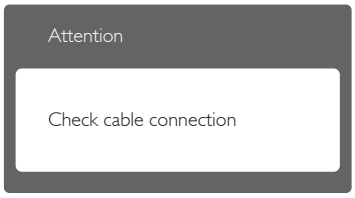
No Picture (Power LED not lit)

- Make sure the power cord is plugged into the power outlet and into the back of the monitor.
- First, ensure that the power button on the front of the monitor is in the OFF position, then press it to the ON position.

No Picture (Power LED is White)

- Make sure the computer is turned on.
- Make sure the signal cable is properly connected to your computer.
- Make sure the monitor cable has no bent pins on the connect side. If yes, repair or replace the cable.
- The Energy Saving feature may be activated

Screen says



- Make sure the monitor cable is properly connected to your computer. (Also refer to the Quick Start Guide).
- Check to see if the monitor cable has bent pins.
- Make sure the computer is turned on.

AUTO button doesn't function

- The auto function is applicable only in VGA-Analog mode. If the result is not satisfactory, you can do manual adjustments via the OSD menu.

Note

The Auto Function is not applicable in DVI-Digital mode as it is not necessary.

Visible signs of smoke or sparks

- Do not perform any troubleshooting steps
- Disconnect the monitor from mains power source immediately for safety
- Contact with Philips customer service representative immediately.

2 Imaging Problems

Image is not centered

- Adjust the image position using the "Auto" function in OSD Main Controls.
- Adjust the image position using the Phase/ Clock of Setup in OSD Main Controls. It is valid only in VGA mode.

Image vibrates on the screen

- Check that the signal cable is properly securely connected to the graphics board or PC.

Vertical flicker appears

- Adjust the image using the "Auto" function in OSD Main Controls.
- Eliminate the vertical bars using the Phase/ Clock of Setup in OSD Main Controls. It is valid only in VGA mode.

Horizontal flicker appears

- Adjust the image using the "Auto" function in OSD Main Controls.
- Eliminate the vertical bars using the Phase/ Clock of Setup in OSD Main Controls. It is valid only in VGA mode.

Image appears blurred, indistinct or too dark

- Adjust the contrast and brightness on On-Screen Display.

An "after-image", "burn-in" or "ghost image" remains after the power has been turned off.

- Uninterrupted display of still or static images over an extended period may cause "burn in", also known as "after-imaging " or "ghost imaging", on your screen. "Burn-in", "after-imaging", or "ghost imaging" is a well-known phenomenon in LCD panel technology. In most cases, the "burned in" or "after-imaging" or "ghost imaging" will disappear gradually over a period of time after the power has been switched off.
- Always activate a moving screen saver program when you leave your monitor unattended.
- Always activate a periodic screen refresh application if your LCD monitor will display unchanging static content.
- Severe" burn-in" or "after-image" or "ghost image" symptoms will not disappear and cannot be repaired. The damage mentioned above is not covered under your warranty.

Image appears distorted. Text is fuzzy or blurred.

- Set the PC's display resolution to the same mode as monitor's recommended screen native resolution.

Green, red, blue, dark, and white dots appears on the screen

- The remaining dots are normal characteristic of the liquid crystal used in today's technology, Please refer the pixel policy for more detail.

The "power on" light is too strong and is disturbing

- You can adjust "power on" light using the power LED Setup in OSD main Controls.

For further assistance, refer to the Consumer Information Centers list and contact Philips customer service representative.

7.2 General FAQs

Q1: When I install my monitor what should I do if the screen shows 'Cannot display this video mode'?

Ans.: Recommended resolution for this monitor: 1366 x 768 @ 60 Hz.

- Unplug all cables, then connect your PC to the monitor that you used previously.
- In the Windows Start Menu, select Settings/ Control Panel. In the Control Panel Window, select the Display icon. Inside the Display Control Panel, select the 'Settings' tab. Under the setting tab, in box labelled 'desktop area', move the sidebar to 1366 x 768 pixels.
- Open 'Advanced Properties' and set the Refresh Rate to 60 Hz, then click OK.
- Restart your computer and repeat step 2 and 3 to verify that your PC is set at 1366 x 768 @ 60 Hz.
- Shut down your computer, disconnect your old monitor and reconnect your Philips LCD monitor.
- Turn on your monitor and then turn on your PC.

Q2: What is the recommended refresh rate for LCD monitor?

Ans.: Recommended refresh rate in LCD monitors is 60 Hz, In case of any disturbance on screen, you can set it up to 75 Hz to see if that removes the disturbance.

Q3: What are the .inf and .icm files on the CD-ROM? How do I install the drivers (.inf and .icm)?

Ans.: These are the driver files for your monitor. Follow the instructions in your user manual to install the drivers. Your computer may ask you for monitor drivers (.inf and .icm files) or a driver disk when you first install your monitor. Follow the instructions to insert the (companion CD-ROM) included in this package.

Monitor drivers (.inf and .icm files) will be installed automatically.

Q4: How do I adjust the resolution?

Ans.: Your video card/graphic driver and monitor together determine the available resolutions. You can select the desired resolution under Windows® Control Panel with the "Display properties".

Q5: What if I get lost when I am making monitor adjustments via OSD?

Ans.: Simply press the **OK** button, then select 'Reset' to recall all of the original factory settings.

Q6: Is the LCD screen resistant to scratches?

Ans.: In general it is recommended that the panel surface is not subjected to excessive shocks and is protected from sharp or blunt objects. When handling the monitor, make sure that there is no pressure or force applied to the panel surface side. This may affect your warranty conditions.

Q7: How should I clean the LCD surface?

Ans.: For normal cleaning, use a clean, soft cloth. For extensive cleaning, please use isopropyl alcohol. Do not use other solvents such as ethyl alcohol, ethanol, acetone, hexane, etc.

Q8: Can I change the color setting of my monitor?

Ans.: Yes, you can change your color setting through OSD control as the following procedures,

- Press "OK" to show the OSD (On Screen Display) menu
- Press "Down Arrow" to select the option "Color" then press "OK" to enter color setting, there are three settings as below.
  1. Color Temperature; The two settings are 6500K and 9300K. With settings in the 6500K range the panel appears "warm, with a red-white color tone", while a 9300K temperature yields "cool, bluewhite toning".
  2. sRGB; this is a standard setting for ensuring correct exchange of colors between different device (e.g. digital cameras, monitors, printers, scanners, etc)
  3. User Define; the user can choose his/her preference color setting by adjusting red, green blue color.

Note

A measurement of the color of light radiated by an object while it is being heated. This measurement is expressed in terms of absolute scale, (degrees Kelvin). Lower Kevin temperatures such as 2004K are red; higher temperatures such as 9300K are blue. Neutral temperature is white, at 6504K.

Q9: Can I connect my LCD monitor to any PC, workstation or Mac?

Ans.: Yes. All Philips LCD monitors are fully compatible with standard PCs, Macs and workstations. You may need a cable adapter to connect the monitor to your Mac system. Please contact your Philips sales representative for more information.

Q10: Are Philips LCD monitors Plug-and-Play?

Ans.: Yes, the monitors are Plug-and-Play compatible with Windows 8/ Windows 7/ Vista/XP/NT, Mac OSX, Linux

Q11: What is Image Sticking, or Image Burn-in, or After Image, or Ghost Image in LCD panels?

Ans.: Uninterrupted display of still or static images over an extended period may cause "burn in", also known as "after-imaging" or "ghost imaging", on your screen. "Burn-in", "after-imaging", or "ghost imaging" is a well-known phenomenon in LCD panel technology. In most cases, the "burned in" or "atter-imaging" or "ghost imaging" will disappear gradually over a period of time after the power has been switched off.
Always activate a moving screen saver

program when you leave your monitor unattended.
Always activate a periodic screen refresh application if your LCD monitor will display unchanging static content.

Warning

Failure to activate a screen saver, or a periodic screen refresh application may result in severe"burn-in" or "after-image" or "ghost image" symptoms will not disappear and cannot be repaired. The damage mentioned above is not covered under your warranty.

Q12: Why is my Display not showing sharp text, and is displaying jagged characters?

Ans.: Your LCD monitor works best at its native resolution of 1366 x 768 @ 60 Hz. For best display, please use this resolution.

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Specifications are subject to change without notice.

Version: M5163V1T